

UNIVERSE BINARY

Microsoft Excel Question Bank

Q1) Explain MS Excel in brief.

Microsoft Excel is a spreadsheet or a computer application that allows the storage of data in the form of a table. Excel was developed by Microsoft and can be used on various operating systems such as Windows, macOS, IOS and Android.

Some of the important features of MS Excel are:

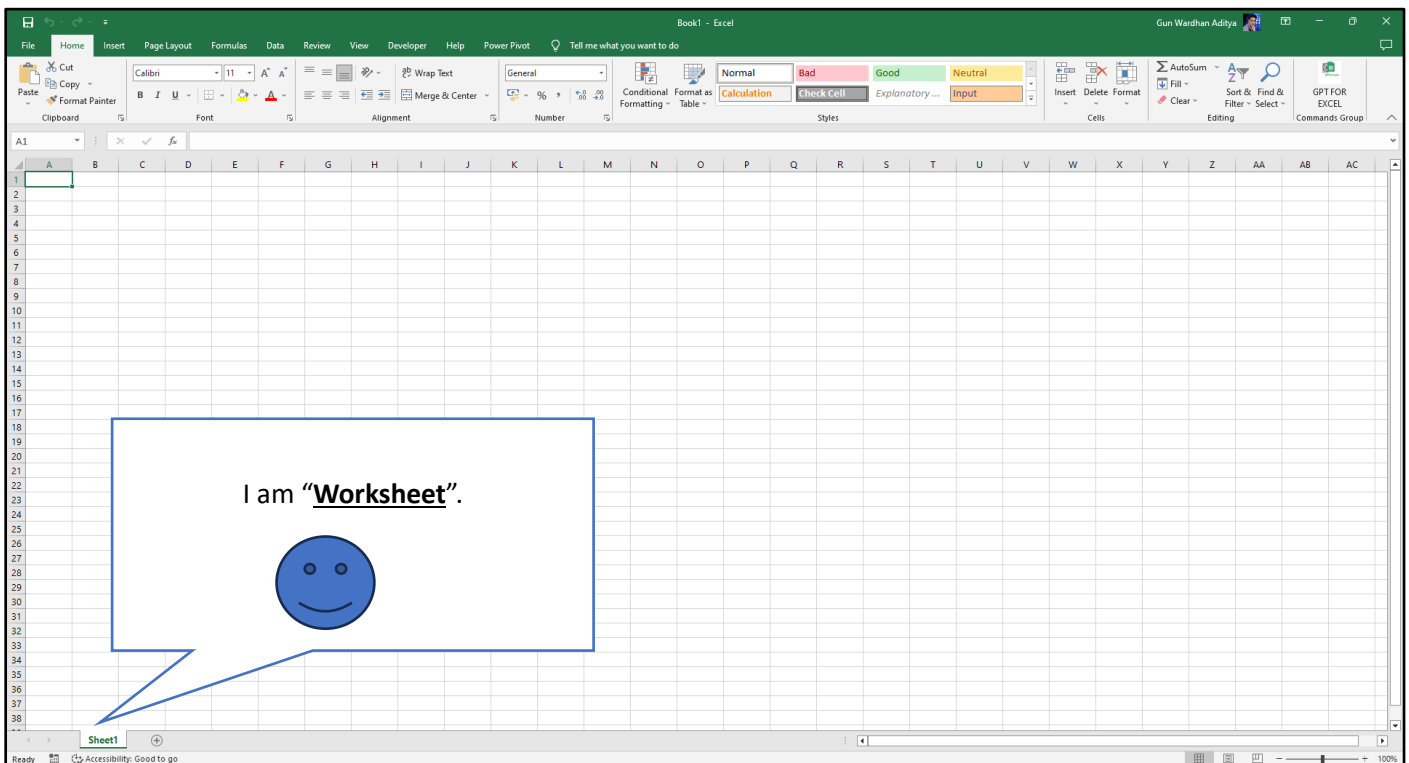
- Availability of Graphing tools
- Built-in functions such as SUM, DATE, COUNTIF, etc
- Allows data analysis through tables, charts, filters, etc
- The availability of Visual Basic for Application (VBA)
- Flexible workbook and worksheet operations
- Allows easy data validation

Q2) What do you mean by cells in an Excel sheet?

The area which falls at the intersection of a column and a row where the information is to be inserted is known as a cell. There are a total of 1,048,576 x 16,384 cells present in a single excel sheet.

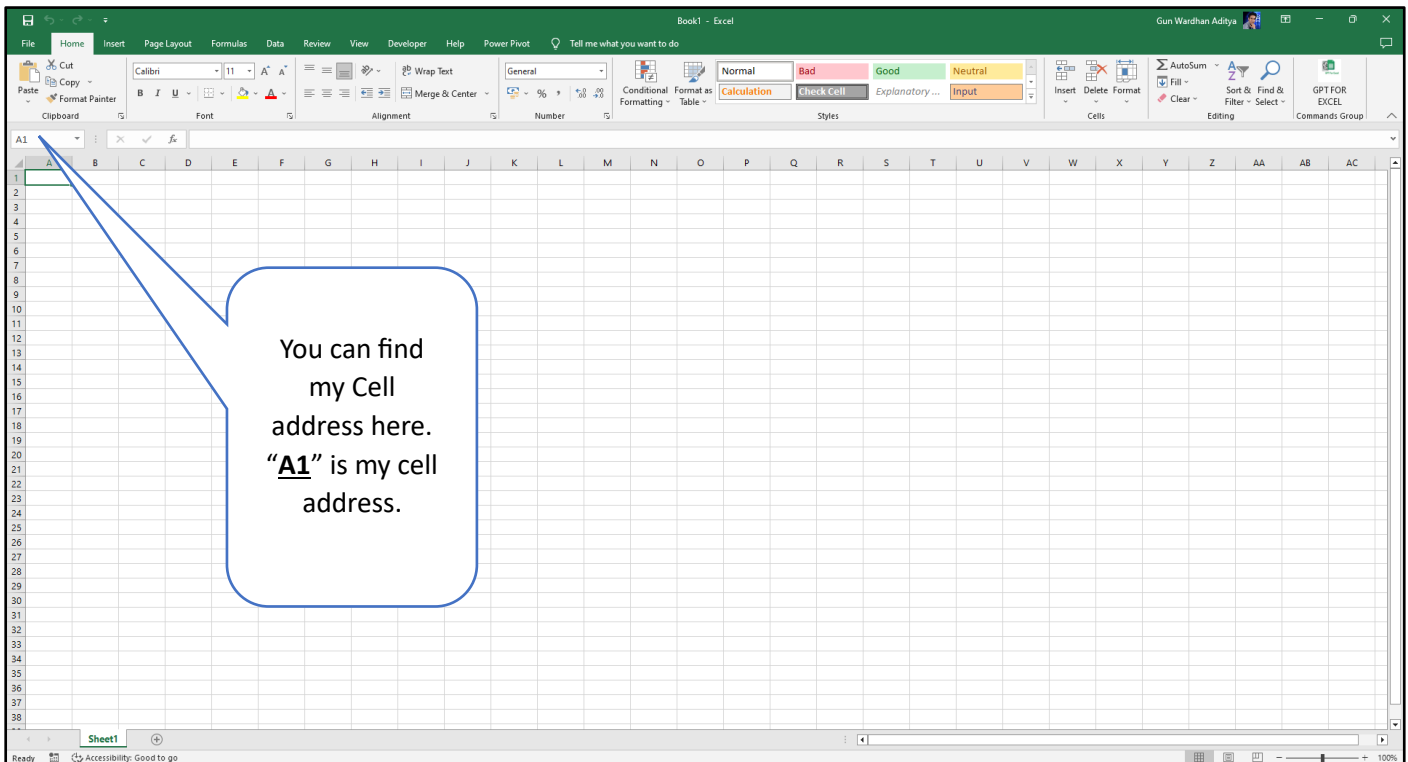
Q3) Explain what is a spreadsheet?

Spreadsheets are a collection of cells that help you manage the data. A single workbook may have more than one worksheet. You can see all the sheets at the bottom of the window, along with the names that you have given them. Take a look at the image below:



Q4) What do you mean by cell address?

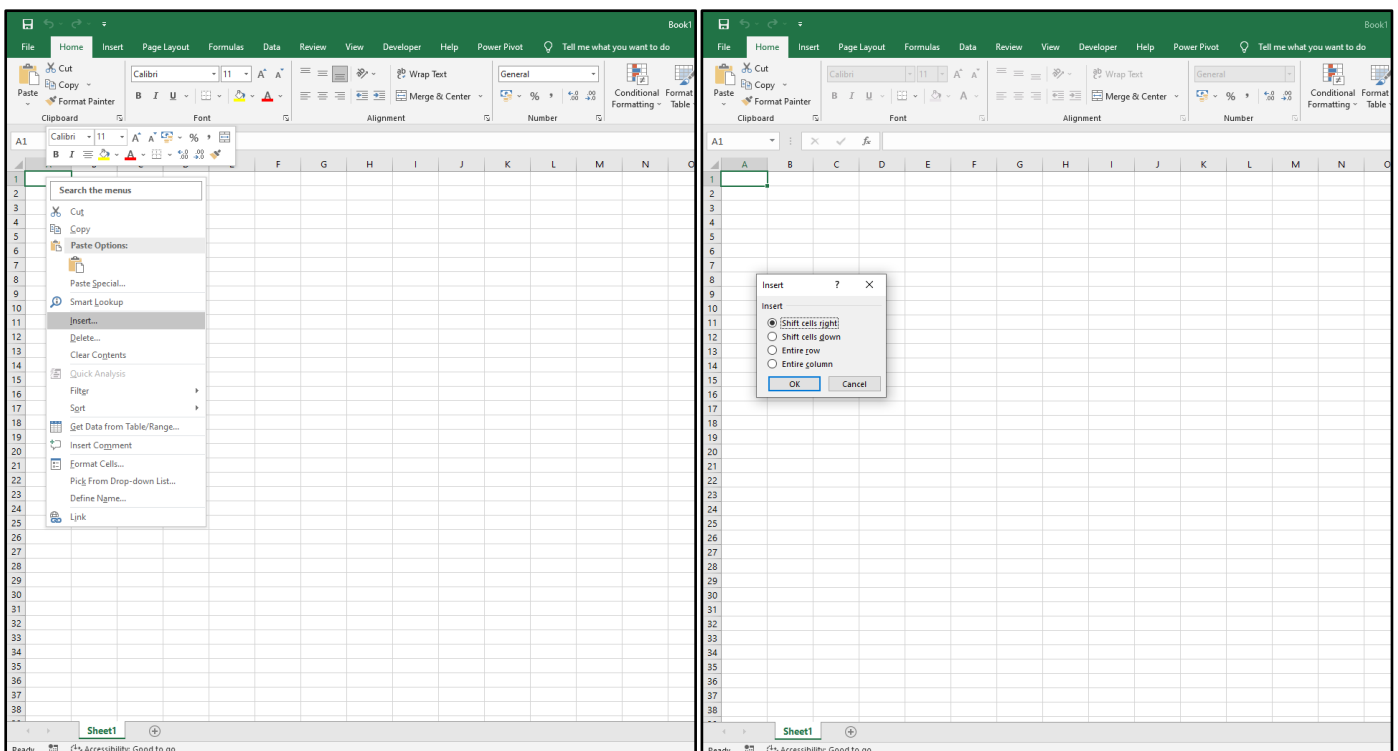
The cell address of an Excel sheet refers to the address that is obtained by the combination of the Row number and the Column alphabet. Each cell of an MS Excel sheet will have a distinct cell address.



Q5) Can you add or insert cells?

Yes, you can insert new cells into a sheet. To add a new cell, simply select the cell where you want to insert it and then select the Insert option. you will see the following window:

Right click on sheet >> Click on Insert (Insert: CTRL + '+', Delete: CTRL + '-')



Q6) Can you format MS Excel cells? If yes, then how?

Yes, MS Excel cells can be formatted. In order to format these cells, you can use the commands present in the Font group of the Home tab. When you open the Font window, you will see the following options:

Name	Description
Number	Allows formatting cells to be of any type such as currency, accounting, date, percentage, etc
Alignment	Allows text control, alignment and setting its direction
Font	Enables various fonts, styles, sizes, colours, etc
Border	Allows cell borders to be changed, removed, coloured, etc
Fill	Enables you to choose different colours and styles to fill up the cell
Protection	Allows you to lock or hide cells

Q7) Can you add comments to a cell?

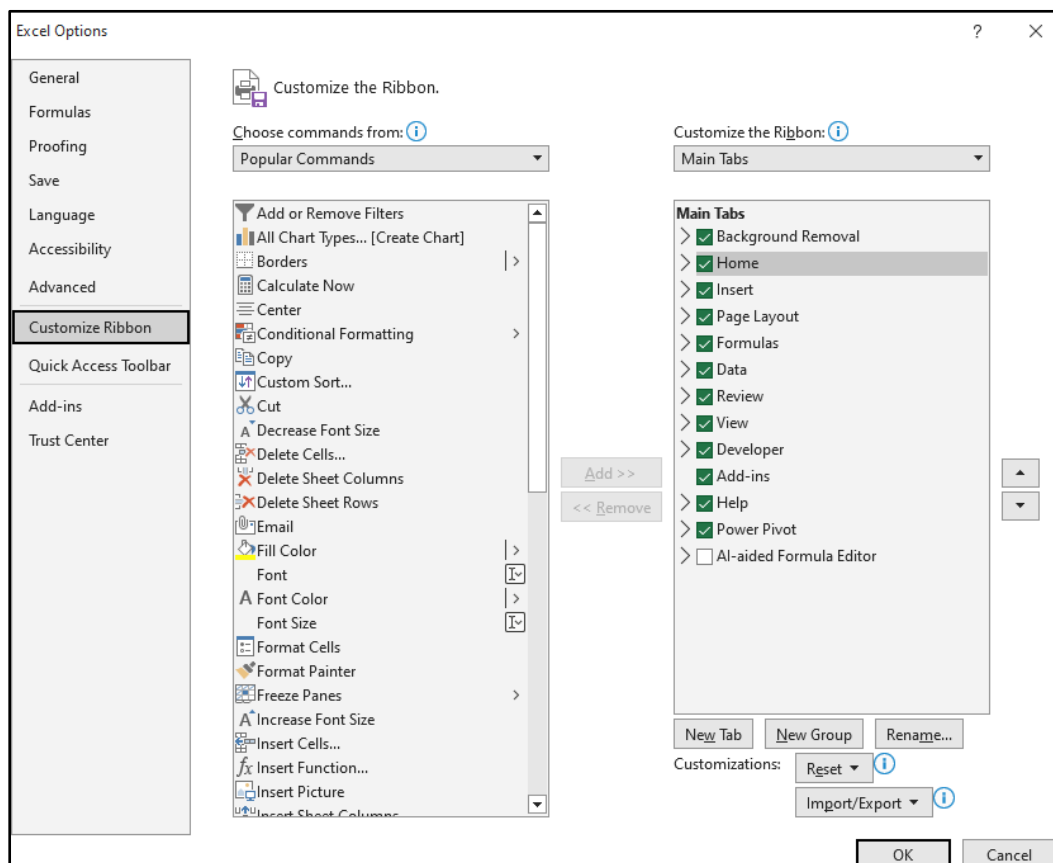
Yes, comments can be added. To add comments to a cell, select the cell, right-click on it and then select the New Comment option. These comments will be visible to all those people who have access to the Excel sheet.

Q8) Can you add new rows and columns to an Excel sheet?

Yes, you can add rows and columns to an Excel sheet. To add new rows and columns select the place where you intend to add them and right-click on it. Then select the Insert option from where you can choose to select an entire row or column. (Insert: CTRL + '+', Delete: CTRL + '-')

Q9) What is Ribbon and where does it appear?

The Ribbon is basically your key interface with Excel and it appears at the top of the Excel window. It allows users to access many of the most important commands directly. It consists of many tabs such as File, Home, View, Insert, etc. You can also customize the ribbon to suit your preferences. To customize the Ribbon, right-click on it and select the "Customize the Ribbon" option. You will see the following window:

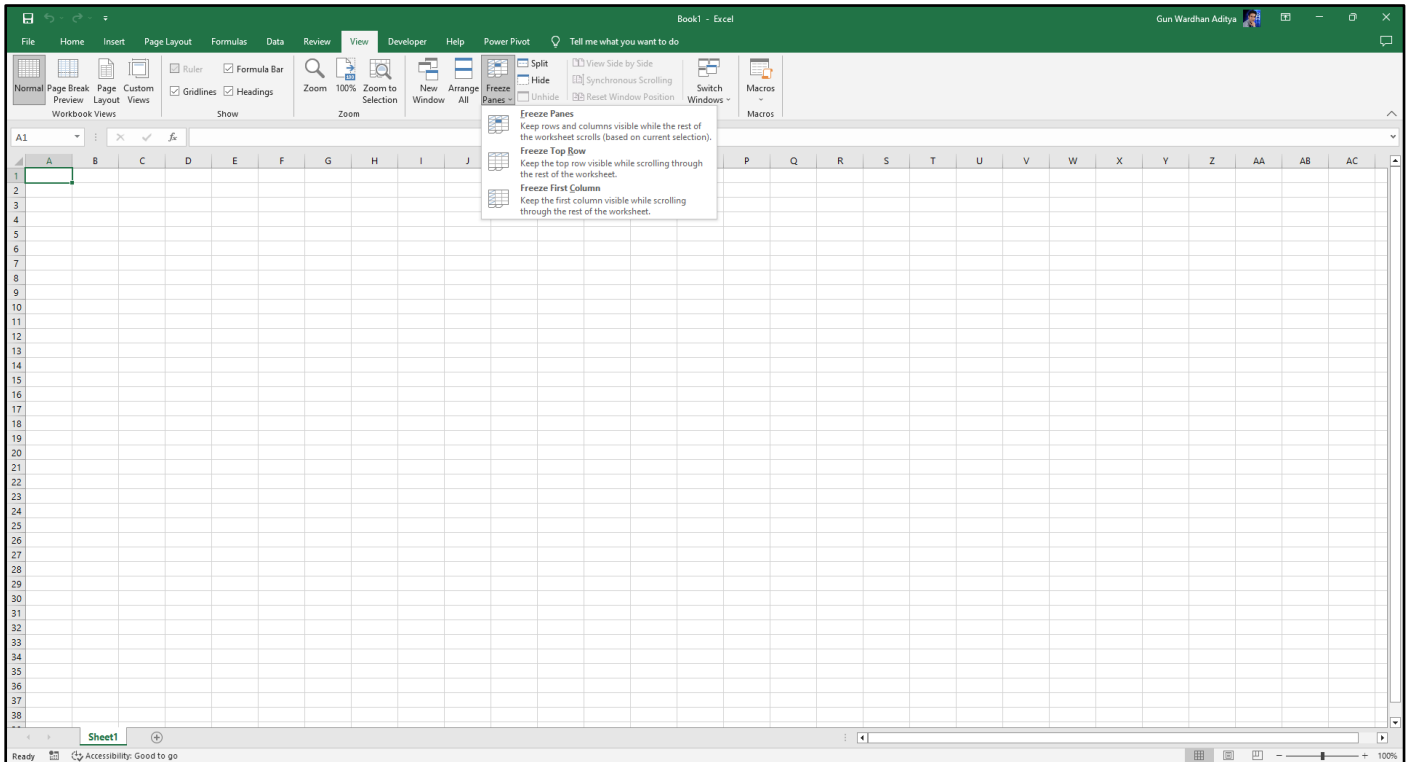


You can select or unselect any option of your choice from here.

Q10) How do you freeze panes in Excel?

MS Excel allows you to freeze panes that will help you see the headings of the rows and the columns even if scroll down a long way on the sheet. To Freeze Panes in Excel, follow the given steps:

1. First, select the Rows and Columns you wish to freeze
2. Then, select Freeze Pane present in the View tab
3. Here, you will see the following three options to selectively freeze the rows and columns as shown in the image below:



Q11) How do you add a Note to a cell?

To add a Note, select the cell and right-click on the same. then select the New Note option and type in any note that you wish to. In case you want to delete the Note, follow the same procedure and select the Delete Note option. Notes are indicated by a red triangle at the top-right corner of the cell.

Q12) Can you protect workbooks in Excel?

Yes, workbooks can be protected. Excel provides three options for this:

1. Passwords can be set to open Workbooks
2. You can protect sheets from being added, deleted, hidden or unhidden
3. Protecting window sizes or positions from being changed
4. Home tab >> Format (Cells) >> Protect Sheet

Q13) How do you apply a single format to all the sheets present in a workbook?

To apply the same format to all the sheets of a workbook, follow the given steps:

1. Right-click on any sheet present in that workbook
2. Then, click on the Select All Sheets option
3. Format any of the sheets and you will see that the format has been applied to all the other sheets as well

Q14) What do you understand by Relative Cell Addresses?

Whenever you copy formulas in Excel, the addresses of the reference cells get modified automatically in order to match the position where the formula is copied. This is done by a system that is called Relative Cell Addresses.

Q15) In case you don't want to modify the cell addresses when they are copied, what should you do?

If you do not want Excel to change the addresses when you copy formulas, you must make use of Absolute Cell Addresses. When you use Absolute Cell References, the row and the column addresses do not get modified and remain the same.

Q16) What will you do if you want to change either the column letter or the row number but not both?

To do this, you must make use of Mixed Cell Addresses where either the row or column is relative while the other is absolute.

Q17) Can you protect cells of a sheet from being copied?

Yes, you can do it by protecting the required cells or the complete sheet. In order to do this, follow the given steps:

1. Select the cells that you want to protect
2. Open up the Font window from the Home tab
3. From the Protection pane, select Protection and then check the Hidden box
4. Click on Review tab present in the Ribbon, and then select Protect sheet option (Excel will not hide the required cells unless you do this)
5. Specify a password (This will help you in unprotecting the sheet later)

Q18) How do you create Named Ranges (Defined Names)?

In Excel, the "Defined Names" option allows you to assign a name to a cell, range of cells, formula, constant, or table. This name is referred to as a "defined name," and it acts as a shorthand reference to the cell or range it represents. Instead of using cell references like "A1" or "B2:C5" in your formulas or functions, you can use the defined name you've assigned, making your formulas more readable and understandable.

Here are the main purposes and benefits of using defined names in Excel:

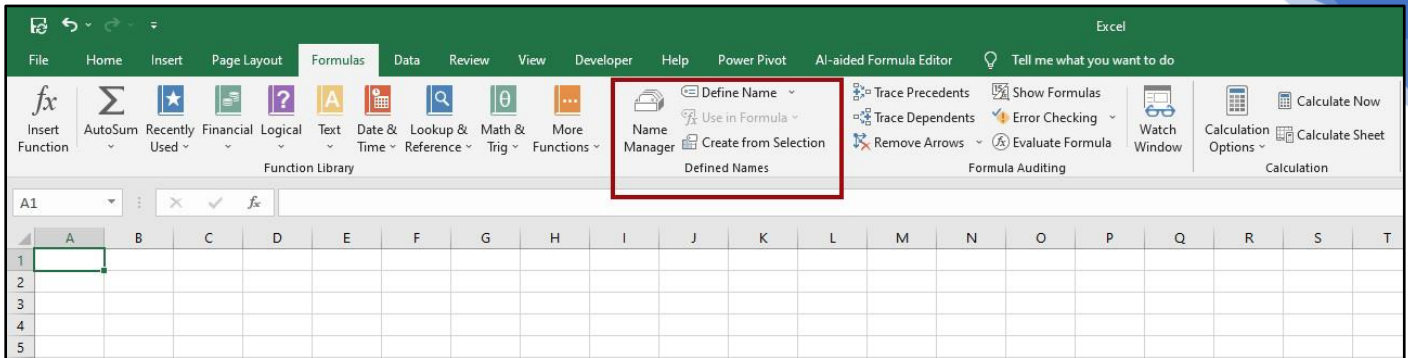
1. **Readability and Clarity:** Using meaningful names instead of cell references makes your formulas and functions more understandable. This is especially helpful when working with complex worksheets or sharing them with others.
2. **Easy Maintenance:** If you need to update a formula or change a range, you only need to update the defined name once, and all formulas using that name will automatically reflect the change.
3. **Avoid Errors:** Defined names reduce the risk of errors caused by mistyping cell references, which can happen when working with large or intricate (complex) spreadsheets.
4. **Dynamic Ranges:** You can create dynamic ranges using formulas like OFFSET, INDEX, or combinations of functions. These formulas can be used as the basis for a defined name, allowing ranges to adjust automatically as your data changes.
5. **External References:** When you link data between different worksheets or workbooks, using defined names can simplify the referencing process.
6. **Table Columns:** When you create a table in Excel, the column headers are automatically assigned as defined names. This makes referencing columns in formulas more intuitive.
7. **Formulas with Logical Structure:** If you have formulas with multiple levels of nesting, using defined names can make the structure of the formula more apparent.

To create or manage defined names:

- **Formulas Tab:** In newer versions of Excel, you can find the "Name Manager" or "Name Manager" button under the "Formulas" tab. This allows you to define, edit, or delete names.

- **Name Box:** You can also define or edit a name directly in the Name Box (the box to the left of the formula bar). Just type the desired name and press Enter.

Defined names provide a way to organize and simplify your spreadsheet work, making it easier to build and maintain complex models while improving overall accuracy.



We will understand this with an example. This is sample commodity data in below image with the year wise value.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1																	
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

If I want to find sum, average, max or min. Then I have to apply formula like this. For example: -

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	commodity	Year_2023	Year_2022	Year_2021	Year_2020	Year_2019	Year_2018	Year_2017	Year_2016	Year_2015							
2	Copper	616.8859999	1004.766001	1069.857503	708.7105012	685.7739999	731.1165028	703.2899997	549.3805007	631.5029986							
3	Gold	303817.0995	451660.3008	453098.0001	448526.4004	350941.4998	316942.7001	315603.6993	312332.3007	292187.5995							
4	Palladium	226114.7996	527345.5994	576575.0004	551794.9009	382825.0005	252664.8502	218749.35	153125.15	173937.3998							
5	Platinum	156157.8002	241708.7001	262561.4002	225000.9994	217025.4997	216147.3002	238118.2997	246563.8003	265496.1002							
6	Silver	3680.379999	5466.596001	6341.352001	5225.09803	4076.971003	3914.662004	4273.105996	4283.973001	3943.796002							
7																	
8																	
9																	
10																	

You can see that I used the sum function "**SUM(B2:B6)**" to determine the sum for the "Year_2023". However, I can accomplish this by using the "Define Range" option.

To create named ranges, follow the given steps:

1. Select the area to which you intend to give a name
2. From Ribbon, select Formulas
3. Click on Define Name from Defined Names group
4. Give any name of your choice

The screenshot shows the Excel interface with the 'Formulas' tab selected. The 'Define Name' dialog box is open, and the 'Name' field is set to 'Year_2023'. The 'Scope' is set to 'Workbook'. The 'Refers to' field is set to '=Sheet2!\$B\$2:\$B\$6'. The 'OK' button is highlighted.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	commodity	Year_2023	Year_2022	Year_2021	Year_2020	Year_2019	Year_2018	Year_2017	Year_2016	Year_2015			Year_2023	Year_2022			
2	Copper	616.8859999	1004.766001	1069.857503	708.7105012	685.7739999	731.1165028	703.2899997	549.3805007	631.5029986			690386.97	1227186			
3	Gold	303817.0995	451660.3008	453098.0001	448526.4004	350941.4998	316942.7001	315603.6993	312332.3007	292187.5995							
4	Palladium	226114.7996	527345.5994	576575.0004	551794.9009	382825.0005	252664.8502	218749.35	153125.15	173937.3998							
5	Platinum	156157.8002	241708.7001	262561.4002	225000.9994	217025.4997	216147.3002	238118.2997	246563.8003	265496.1002							
6	Silver	3680.379999	5466.596001	6341.352001	5225.09803	4076.971003	3914.662004	4273.105996	4283.973001	3943.796002							

I can substitute the range name for the range in the sum function after defining a name. The name range "Year_2023" is shown.

The screenshot shows the Excel interface with the 'Formulas' tab selected. The 'Use in Formula' dialog box is open, and the 'Name' field is set to 'Year_2023'. The 'Scope' is set to 'Workbook'. The 'Refers to' field is set to '=SUM(year)'. The 'OK' button is highlighted.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	commodity	Year_2023	Year_2022	Year_2021	Year_2020	Year_2019	Year_2018	Year_2017	Year_2016	Year_2015			Year_2023	Year_2022			
2	Copper	616.8859999	1004.766001	1069.857503	708.7105012	685.7739999	731.1165028	703.2899997	549.3805007	631.5029986			=SUM(year				
3	Gold	303817.0995	451660.3008	453098.0001	448526.4004	350941.4998	316942.7001	315603.6993	312332.3007	292187.5995			SUM(number1, [number2], ...)				
4	Palladium	226114.7996	527345.5994	576575.0004	551794.9009	382825.0005	252664.8502	218749.35	153125.15	173937.3998			(X) YEAR				
5	Platinum	156157.8002	241708.7001	262561.4002	225000.9994	217025.4997	216147.3002	238118.2997	246563.8003	265496.1002			(X) Year_2023				
6	Silver	3680.379999	5466.596001	6341.352001	5225.09803	4076.971003	3914.662004	4273.105996	4283.973001	3943.796002			(X) YEARFRAC				

As you can see below, I utilized range name rather than cell range in the sum function.

The screenshot shows the Excel interface with the 'Formulas' tab selected. The formula bar displays '=SUM(Year_2023)'. The formula is entered in cell M2, which displays the sum of the values in the Year_2023 range.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	commodity	Year_2023	Year_2022	Year_2021	Year_2020	Year_2019	Year_2018	Year_2017	Year_2016	Year_2015			Year_2023	Year_2022			
2	Copper	616.8859999	1004.766001	1069.857503	708.7105012	685.7739999	731.1165028	703.2899997	549.3805007	631.5029986			=SUM(Year_2023)				
3	Gold	303817.0995	451660.3008	453098.0001	448526.4004	350941.4998	316942.7001	315603.6993	312332.3007	292187.5995							
4	Palladium	226114.7996	527345.5994	576575.0004	551794.9009	382825.0005	252664.8502	218749.35	153125.15	173937.3998							
5	Platinum	156157.8002	241708.7001	262561.4002	225000.9994	217025.4997	216147.3002	238118.2997	246563.8003	265496.1002							
6	Silver	3680.379999	5466.596001	6341.352001	5225.09803	4076.971003	3914.662004	4273.105996	4283.973001	3943.796002							

The sum is accurately displayed along with the range name.

Excel

File Home Insert Page Layout Formulas Data Review View Developer Help Power Pivot AI-aided Formula Editor Tell me what you want to do

Function Library: Insert Function, AutoSum, Recently Used, Financial, Logical, Text, Date & Time, Lookup & Reference, Math & Trig, More Functions

Defined Names: Name Manager, Define Name, Use in Formula, Create from Selection

Formula Auditing: Trace Precedents, Trace Dependents, Remove Arrows, Show Formulas, Error Checking, Evaluate Formula

Calculation: Watch Window, Calculation Options, Calculate Now, Calculate Sheet

Formula Bar: M2, **=SUM(Year_2023)**

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	commodity	Year_2023	Year_2022	Year_2021	Year_2020	Year_2019	Year_2018	Year_2017	Year_2016	Year_2015			Year_2023	Year_2022			
2	Copper	616.8859999	1004.766001	1069.857503	708.7105012	685.7739999	731.1165028	703.2899997	549.3805007	631.5029986			690386.97	1227186			
3	Gold	303817.0995	451660.3008	453098.0001	448526.4004	350941.4998	316942.7001	315603.6993	312332.3007	292187.5995							
4	Palladium	226114.7996	527345.5994	576575.0004	551794.9009	382825.0005	252664.8502	218749.35	153125.15	173937.3998							
5	Platinum	156157.8002	241708.7001	262561.4002	225000.9994	217025.4997	216147.3002	238118.2997	246563.8003	265496.1002							
6	Silver	3680.379999	5466.596001	6341.352001	5225.09803	4076.971003	3914.662004	4273.105996	4283.973001	3943.796002							
7																	
8																	
9																	
10																	

The defined range name can be edit using Name Manager.

Excel

File Home Insert Page Layout Formulas Data Review View Developer Help Power Pivot AI-aided Formula Editor Tell me what you want to do

Function Library: Insert Function, AutoSum, Recently Used, Financial, Logical, Text, Date & Time, Lookup & Reference, Math & Trig, More Functions

Defined Names: Name Manager, Define Name, Use in Formula, Create from Selection

Formula Auditing: Trace Precedents, Trace Dependents, Remove Arrows, Show Formulas, Error Checking, Evaluate Formula

Calculation: Watch Window, Calculation Options, Calculate Now, Calculate Sheet

Formula Bar: M2, **=SUM(Year_2023)**

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1	commodity	Year_2023	Year_2022	Year_2021	Year_2020	Year_2019	Year_2018	Year_2017	Year_2016	Year_2015			Year_2023	Year_2022					
2	Copper	616.8859999	1004.766001	1069.857503	708.7105012	685.7739999	731.1165028	703.2899997	549.3805007	631.5029986			690386.97	1227186					
3	Gold	303817.0995	451660.3008	453098.0001	448526.4004	350941.4998	316942.7001	315603.6993	312332.3007	292187.5995									
4	Palladium	226114.7996	527345.5994	576575.0004	551794.9009	382825.0005	252664.8502	218749.35	153125.15	173937.3998									
5	Platinum	156157.8002	241708.7001	262561.4002	225000.9994	217025.4997	216147.3002	238118.2997	246563.8003	265496.1002									
6	Silver	3680.379999	5466.596001	6341.352001	5225.09803	4076.971003	3914.662004	4273.105996	4283.973001	3943.796002									
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			
16																			
17																			
18																			
19																			
20																			
21																			
22																			
23																			
24																			
25																			
26																			

Name Manager

New... Edit... Delete Filter

Name	Value	Refers To	Scope	Comment
Year_2023	616.8859999	=Sheet2!\$B\$2:\$B\$6	Workbo...	

Refers to: ☐ ☒ =Sheet2!\$B\$2:\$B\$6

Close

The "Create from Selection" option allows you to create various range names.

Excel

File Home Insert Page Layout Formulas Data Review View Developer Help Power Pivot AI-aided Formula Editor Tell me what you want to do

Function Library: Insert Function, AutoSum, Recently Used, Financial, Logical, Text, Date & Time, Lookup & Reference, Math & Trig, More Functions

Defined Names: Name Manager, Create from Selection, Use in Formula

Formula Auditing: Trace Precedents, Trace Dependents, Remove Arrows, Show Formulas, Error Checking, Evaluate Formula

Calculation: Watch Window, Calculation Options, Calculate Now, Calculate Sheet

Formulas: B1 Year_2023

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	commodity	Year_2023	Year_2022	Year_2021	Year_2020	Year_2019	Year_2018	Year_2017	Year_2016	Year_2015			Year_2023	Year_2022			
2	Copper	616.8859999	1004.766001	1069.857503	708.7105012	685.7739999	731.1165028	703.2899997	549.3805007	631.5029986							
3	Gold	303817.0995	451660.3008	453098.0001	448526.4004	350941.4998	316942.7001	315603.6993	312332.3007	292187.5995							
4	Palladium	226114.7996	527345.5994	576575.0004	551794.9009	382825.0005	252664.8502	218749.35	153125.15	173937.3998							
5	Platinum	156157.8002	241708.7001	262561.4002	225000.9994	217025.4997	216147.3002	238118.2997	246563.8003	265496.1002							
6	Silver	3680.379999	5466.596001	6341.352001	5225.09803	4076.971003	3914.662004	4273.105996	4283.973001	3943.796002							

Create Names from Selection ? X

Create names from values in the:

- ☒ Top row
- ☐ Left column
- ☐ Bottom row
- ☐ Right column

OK Cancel

You can see all defined range names in Name Manager.

Excel

File Home Insert Page Layout Formulas Data Review View Developer Help Power Pivot AI-aided Formula Editor Tell me what you want to do

Function Library: Insert Function, AutoSum, Recently Used, Financial, Logical, Text, Date & Time, Lookup & Reference, Math & Trig, More Functions

Defined Names: Name Manager, Create from Selection, Use in Formula

Formula Auditing: Trace Precedents, Trace Dependents, Remove Arrows, Show Formulas, Error Checking, Evaluate Formula

Calculation: Watch Window, Calculation Options, Calculate Now, Calculate Sheet

Formulas: B1 Year_2023

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1	commodity	Year_2023	Year_2022	Year_2021	Year_2020	Year_2019	Year_2018	Year_2017	Year_2016	Year_2015			Year_2023	Year_2022					
2	Copper	616.8859999	1004.766001	1069.857503	708.7105012	685.7739999	731.1165028	703.2899997	549.3805007	631.5029986									
3	Gold	303817.0995	451660.3008	453098.0001	448526.4004	350941.4998	316942.7001	315603.6993	312332.3007	292187.5995									
4	Palladium	226114.7996	527345.5994	576575.0004	551794.9009	382825.0005	252664.8502	218749.35	153125.15	173937.3998									
5	Platinum	156157.8002	241708.7001	262561.4002	225000.9994	217025.4997	216147.3002	238118.2997	246563.8003	265496.1002									
6	Silver	3680.379999	5466.596001	6341.352001	5225.09803	4076.971003	3914.662004	4273.105996	4283.973001	3943.796002									

Name Manager

New... Edit... Delete Filter

Name	Value	Refers To	Scope	Comment
Year_2015	{631.5029986;292187.5995}	=Sheet2!\$J\$2:\$J\$6	Workbo...	
Year_2016	{549.3805007;312332.3007}	=Sheet2!\$J\$2:\$J\$6	Workbo...	
Year_2017	{703.2899997;315603.6993}	=Sheet2!\$J\$2:\$J\$6	Workbo...	
Year_2018	{731.1165028;316942.7001}	=Sheet2!\$J\$2:\$J\$6	Workbo...	
Year_2019	{685.7739999;350941.4998}	=Sheet2!\$J\$2:\$J\$6	Workbo...	
Year_2020	{708.7105012;448526.4004}	=Sheet2!\$J\$2:\$J\$6	Workbo...	
Year_2021	{1069.857503;453098.0001}	=Sheet2!\$J\$2:\$J\$6	Workbo...	
Year_2022	{1004.766001;451660.3008}	=Sheet2!\$J\$2:\$J\$6	Workbo...	
Year_2023	{616.8859999;303817.0995}	=Sheet2!\$J\$2:\$J\$6	Workbo...	

Refers to: X Y =Sheet2!\$J\$2:\$J\$6

Close

You can also define or edit a name directly in the Name Box (the box to the left of the formula bar). Just type the desired name and press Enter.

The screenshot shows an Excel spreadsheet with a table of commodity prices. The table has columns for commodity names (A1:A6) and years from 2023 to 2015 (B1:J1). The data rows (A2:J6) contain numerical values for Copper, Gold, Palladium, Platinum, and Silver. The Name Manager dialog box is open, showing a list of defined names. The 'DataRange' name is selected, and its value is shown as 'Year_2023'. The 'Refers To' column shows the formula 'Year_2023' for each year name. The 'Scope' column shows 'Workbook' for all names.

Commodity	Year_2023	Year_2022	Year_2021	Year_2020	Year_2019	Year_2018	Year_2017	Year_2016	Year_2015
Copper	616.8859999	1004.766001	1069.857503	708.7105012	685.7739999	731.1165028	703.2899997	549.3805007	631.5029986
Gold	303817.0995	451660.3008	453098.0001	448526.4004	350941.4998	316942.7001	315603.6993	312332.3007	292187.5995
Palladium	226114.7996	527345.5994	576575.0004	551794.9009	382825.0005	252664.8502	218749.35	153125.15	173937.3998
Platinum	156157.8002	241708.7001	262561.4002	225000.9994	217025.4997	216147.3002	238118.2997	246563.8003	265496.1002
Silver	3680.379999	5466.596001	6341.352001	5225.09803	4076.971003	3914.662004	4273.105996	4283.973001	3943.796002

And you can use all defined name range in your formula and function.

The screenshot shows the same Excel spreadsheet with a formula entered in cell M2: `=SUM(year)`. The formula bar shows the formula. The 'Name Manager' dialog box is open, showing the 'DataRange' name. The 'Refers To' column shows the formula 'Year_2023' for each year name. The 'Scope' column shows 'Workbook' for all names.

Commodity	Year_2023	Year_2022	Year_2021	Year_2020	Year_2019	Year_2018	Year_2017	Year_2016	Year_2015
Copper	616.8859999	1004.766001	1069.857503	708.7105012	685.7739999	731.1165028	703.2899997	549.3805007	631.5029986
Gold	303817.0995	451660.3008	453098.0001	448526.4004	350941.4998	316942.7001	315603.6993	312332.3007	292187.5995
Palladium	226114.7996	527345.5994	576575.0004	551794.9009	382825.0005	252664.8502	218749.35	153125.15	173937.3998
Platinum	156157.8002	241708.7001	262561.4002	225000.9994	217025.4997	216147.3002	238118.2997	246563.8003	265496.1002
Silver	3680.379999	5466.596001	6341.352001	5225.09803	4076.971003	3914.662004	4273.105996	4283.973001	3943.796002

Q19) What are macros?

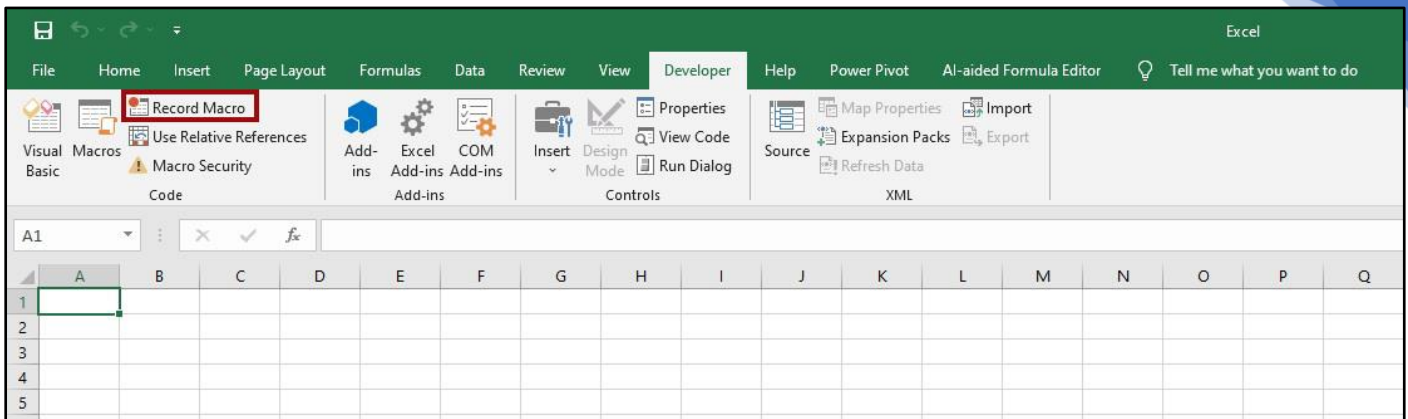
Macros are a feature in software applications, including Microsoft Excel, that allow you to automate a series of tasks or actions. They are particularly useful for repetitive tasks that you perform frequently, as they can save you a lot of time and effort. Let's delve into the concept of macros and how they work, using your example of Excel.

A macro is a sequence of instructions that can be executed automatically. In the context of Excel, a macro records a series of actions you perform in the software, such as formatting cells, entering data, applying formulas, and more. Once recorded, you can play back the macro to replicate those actions without having to perform them manually each time.

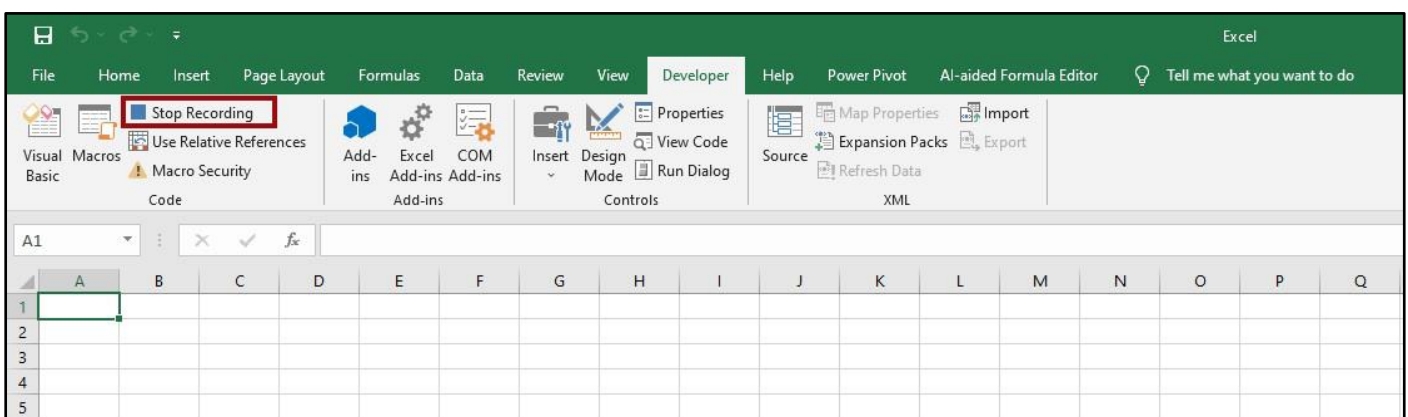
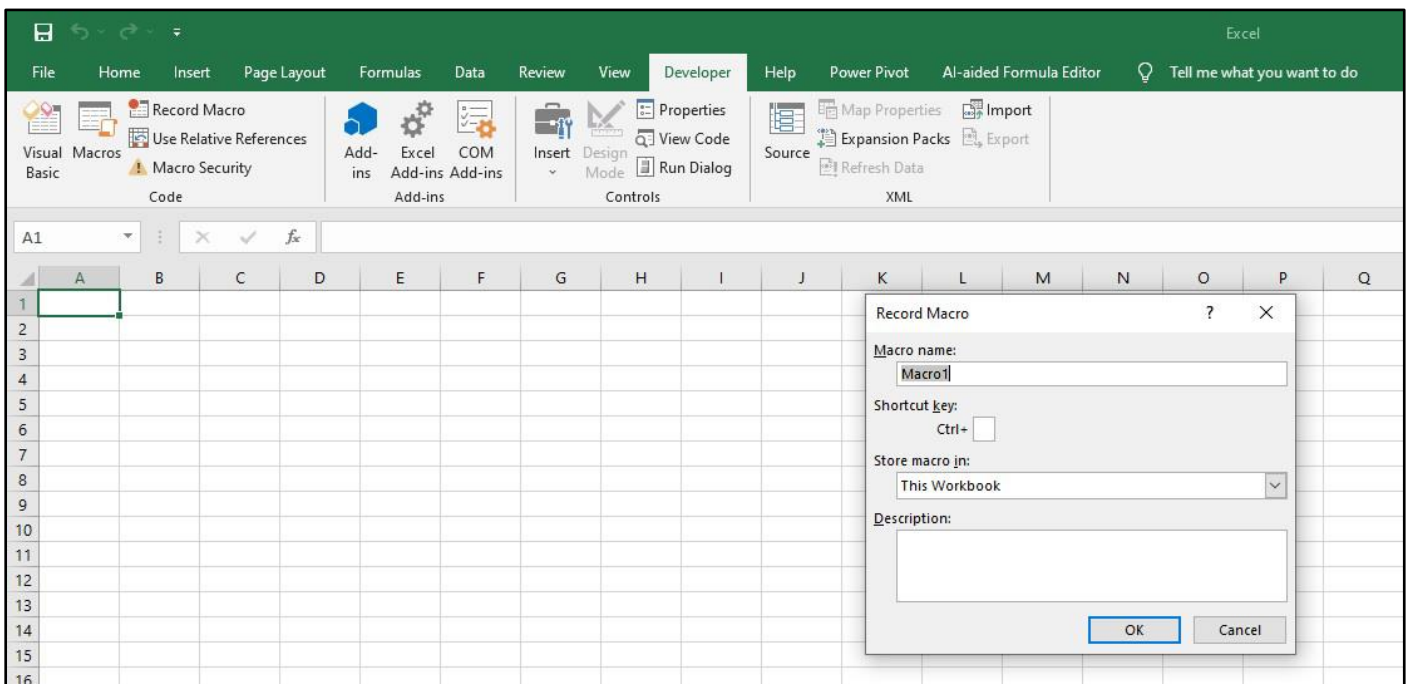
Creating a Macro in Excel:

Here's how you can create a macro in Excel:

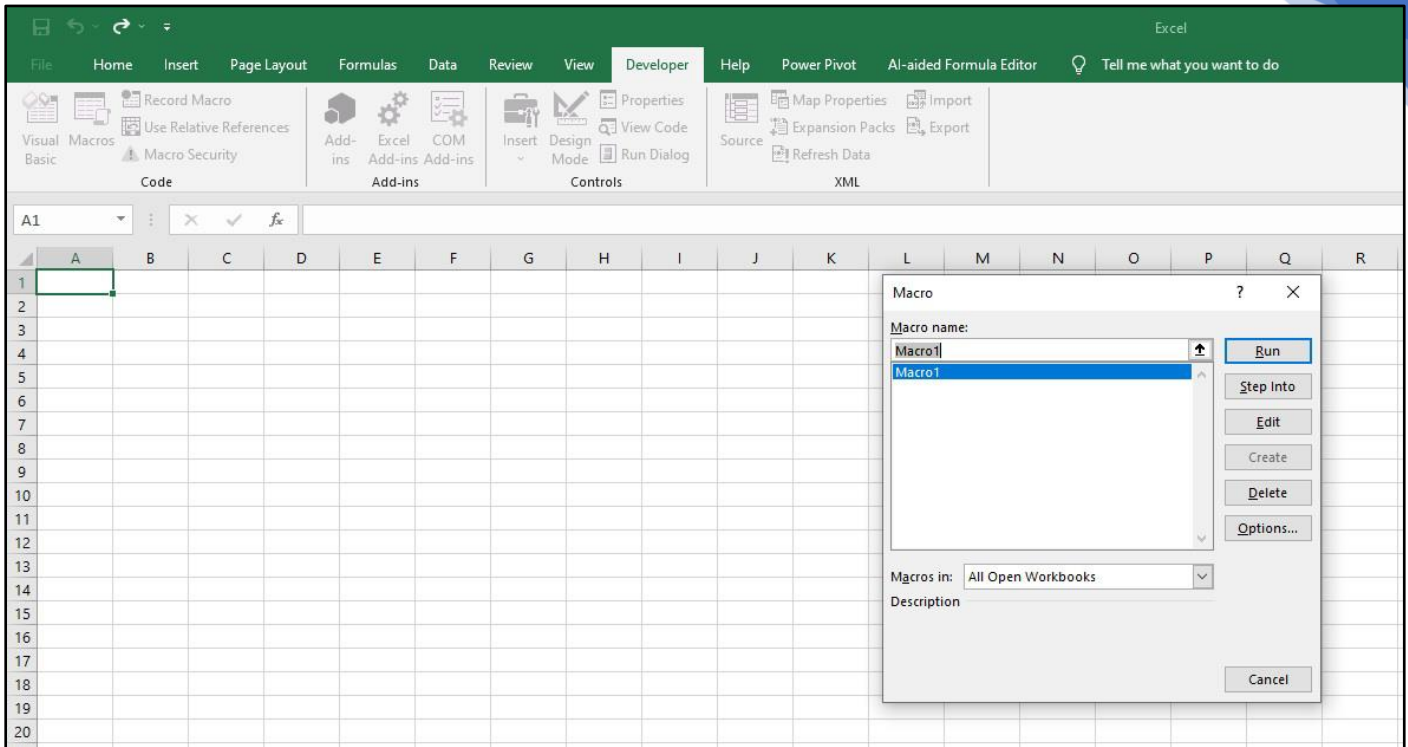
- **Recording:** To create a macro, you first start by recording the actions you want to automate. For instance, in your example, you might start by selecting cells, entering data, applying formulas, and formatting cells to calculate sales, profits, and losses for different items.



- **Recording Toolbar:** Excel provides a recording toolbar that allows you to start and stop recording, and also provides options to name the macro and assign it to a specific button or shortcut key.



- **Perform Actions:** While recording, you perform the actions you want to automate. Excel records these actions in a programming language called Visual Basic for Applications (VBA), which is a scripting language used for automation within Microsoft Office applications.



Saving and Using Macros:

Once you've recorded your macro, you can save it. Excel stores macros in a workbook as a module written in VBA. This module contains the instructions that correspond to the actions you recorded. You can save macros in your personal workbook, which makes them available for any Excel workbook you open.

Playing Back Macros:

After saving the macro, you can play it back whenever you need to perform the same set of actions. This can be done by running the macro from the Macros menu or using a shortcut key or a button that you associated with the macro.

Benefits of Macros:

- **Time Efficiency:** Macros save time by automating repetitive tasks. In your example, instead of manually calculating sales and profits for each item every day, you can run the macro to do it automatically.
- **Accuracy:** Macros reduce the risk of human errors that can occur during manual data entry or calculations.
- **Consistency:** Macros ensure that the same sequence of actions is performed each time, maintaining consistency across tasks.

Limitations:

- **Complexity:** Creating and editing macros can be complex, especially if you need to perform more advanced automation.
- **Debugging:** If there are errors in the macro, troubleshooting and debugging can be challenging, especially for users with limited programming experience.

Security Considerations:

- **Malicious Use:** Because macros can contain code, they can be used to spread malware. Excel has security features to help mitigate this risk, such as disabling macros from unknown sources.

In summary, macros in Excel are a powerful tool for automating repetitive tasks by recording a sequence of actions. They can save time, reduce errors, and improve consistency in tasks that require the same set of steps to be performed regularly. However, creating and managing macros might require some understanding of VBA and programming concepts.

Q20) How can you create dropdown lists in Excel using the "Data Validation" feature, and what are the functionalities of "Circle Invalid Data" and "Clear Validation Circles"? Additionally, could you provide an overview of the different "Validation Criteria" within "Data Validation" and explain how they contribute to maintaining data accuracy and consistency?

1. Creating Dropdown Lists in Excel using "Data Validation":

Dropdown lists in Excel can be created using the "**Data Validation**" feature. This feature allows you to specify a list of predefined options that users can choose from when entering data into a cell. Here's how you can do it:

- **Step 1:** Select the Cell: Choose the cell where you want to create the dropdown list.
- **Step 2:** Open Data Validation Dialog: In Excel, go to the "**Data**" tab on the Ribbon and click on "**Data Validation**".
- **Step 3:** Set Validation Settings:
 - In the "Settings" tab of the Data Validation dialog box:
 - Choose "List" from the "Allow" dropdown.
 - In the "Source" field, either type the options you want separated by commas or reference a range where the options are located.
- **Step 4:** Additional Options: You can configure additional settings, such as input messages and error alerts, to guide users while entering data.
- **Step 5:** Apply Data Validation: Click "OK" to apply the data validation settings to the selected cell. A dropdown arrow will appear in the cell, allowing users to choose from the provided options.

2. Functionalities of "**Circle Invalid Data**" and "**Clear Validation Circles**":

- **Circle Invalid Data:**
 - This feature visually identifies cells that contain data that doesn't meet the validation criteria you've set.
 - For example, if a cell contains a value outside the allowed range, a small circle appears in the corner of the cell.
- **Clear Validation Circles:**
 - This option allows you to remove the circles that indicate invalid data in cells.
 - When you clear validation circles, any existing circles that mark invalid data will be removed from the cells.

3. Overview of Different "Validation Criteria" within "Data Validation":

The "**Data Validation**" feature in Excel offers various validation criteria to control and ensure the accuracy of data entry:

- **Any Value:** Allows any data to be entered.
- **Whole Number:** Permits only whole numbers within a specified range.
- **Decimal:** Permits only decimal numbers within a range.
- **List:** Provides a dropdown of predefined options to select from.
- **Date:** Permits only dates within a specific range.
- **Time:** Permits only times within a specific range.

- **Text Length:** Specifies minimum and maximum character lengths for text.

- **Custom:** Allows you to define custom formulas to validate data.

These validation criteria play a crucial role in maintaining data accuracy and consistency by limiting the type of data that can be entered and guiding users to input valid information.

In summary, creating dropdown lists using the "Data Validation" feature in Excel is a valuable way to ensure data accuracy. The functionalities of "Circle Invalid Data" and "Clear Validation Circles" help visually identify and manage validation issues. The various "Validation Criteria" within "Data Validation" contribute to maintaining consistent and accurate data entry by enforcing specific rules and constraints.

Q21) Explain Pivot tables along with their features?

Pivot Tables are statistical tables that condense data of those tables that have extensive information. The summary can be based on any field such as sales, averages, sums, etc that the pivot table represents in a simple and intelligent manner.

Features:

Some of the features of Excel Pivot Tables are as follows:

- Allow the display of exact data you have to analyze
- Provide various angles to view the data
- Allow you to focus on important details
- Comparison of data is very handy
- Pivot tables can detect different patterns, relationships, data trends, etc.
- They can create instant data
- Accurate reports
- Serve the base for Pivot charts

In detail, A pivot table is a powerful data analysis tool used in spreadsheet software like Microsoft Excel, Google Sheets, and others. It allows you to summarize and analyze large datasets quickly and efficiently. Pivot tables are particularly useful for organizing, summarizing, and extracting insights from complex data.

Here are the key features and functions of pivot tables:

1. Data Summarization: Pivot tables are primarily used to summarize large datasets into more manageable and understandable formats. They help in aggregating data based on specific criteria, such as summing up values, calculating averages, finding minimum or maximum values, and more.

2. Drag-and-Drop Interface: Pivot tables often have user-friendly interfaces that allow you to drag and drop columns from your dataset into specific areas of the pivot table, such as rows, columns, values, and filters. This makes it easy to create custom views of your data.

3. Row and Column Labels: You can use rows and columns in a pivot table to categorize and segment your data. For example, you might use a date column as row labels to group data by time periods (e.g., months or quarters), and use category columns as column labels to analyze data by different categories.

4. Value Fields: Pivot tables allow you to specify which numerical values you want to analyze. You can apply various aggregate functions (e.g., sum, average, count) to these values to understand trends and patterns.

5. Filters: Filters in pivot tables enable you to focus on specific subsets of data. You can apply filters to columns to include or exclude certain values, making it easier to drill down into specific details.

6. Drill-Down Capability: You can drill down into the data within a pivot table to see the individual records that make up a summary value. This can be helpful when you need to investigate specific data points.

7. Grouping and Sorting: Pivot tables allow you to group data within rows or columns, making it easier to organize and analyze your data. You can also sort data within the pivot table to highlight trends or patterns.

8. Calculated Fields: Some pivot table software allows you to create custom calculated fields. This feature enables you to perform calculations on the fly, such as calculating the percentage of total for a specific value.

9. Multiple Data Sources: Advanced pivot table features may allow you to pull data from multiple sources or tables, helping you consolidate and analyze data from various places.

10. Dynamic Updates: When your source data changes, pivot tables can be refreshed to reflect the latest information automatically. This ensures that your analysis remains up to date.

11. Charts and Visualizations: Pivot tables often work seamlessly with charting tools, allowing you to create charts and graphs based on your summarized data for more visual representations of your findings.

In summary, pivot tables are a versatile tool for data analysis, enabling users to quickly transform and summarize large datasets into meaningful insights. They provide a flexible and interactive way to explore and make sense of complex data, making them invaluable in various professional fields, from finance and marketing to research and business intelligence.

Q22) How do you create Pivot Tables?

In order to create a Pivot table, you will first need to prepare the data in a tabular format. Keep the following points in mind while preparing the data:

- Arrange the data into rows and columns
- The first row should contain unique heading for each of the columns
- The columns should have only one type of data
- Rows must have data for a single recording only
- No blank rows
- Columns should not be completely blank
- The data for creating Pivot table should be separate from other data present in the sheet

For example, let's create a Pivot chart for the table shown in the image below:

To create a Pivot table, select the table and click on the Insert tab. then select Pivot Table command and you will see the following window:

Specify where you intend to create the table and then click on OK. Once this is done you will see that an empty pivot table has been created. Also, PivotTables Fields pane will open that will help you configure the Pivot table. Take a look at the image below where I have created a Pivot Table:

Q23) What are Pivot charts in MS Excel?

MS Excel charts are data visualization tools that help you visualize data in various ways. These charts can be of any type such as Bar, Pie, Area, Line, Doughnut, etc. For example, take a look at the Pivot table in the image below:

Now, if you wish to create a pivot chart for this table, select any cell from the table and then from the Insert tab, choose the Pivot Chart option. You will see the following options:

Choose any chart of your preference and click on OK. You can also format these charts respectively.

Q24) Can you create Pivot tables using multiple tables?

Yes, you can create Pivot tables using more than one base table. To do this, follow the given steps:

1. Press Alt+D and then press P to open up the PivotTable.
2. Then select Multiple consolidation ranges option and click on Next and you will see another dialog box as shown below:

3. Select I will create the page fields option and click on Next.
4. In the next window, you will need to add all the required ranges as shown below:
5. Once that is done, click on Next
6. Specify the region where you want to create the table and then click on Finish

You will see the pivot table has been created by merging both the tables as shown in the image below:

In Excel 2016 and earlier versions, you can use the PivotTable and PivotChart Wizard to create pivot tables. Here's how you can do it:

Yes, you can create a Pivot of multiple tables using the PivotTable and PivotChart Wizard in Excel. Here are the steps involved:

1. Open the Excel workbook that contains the tables you want to pivot.
2. Select any cell in the workbook.
3. Press Alt+D+P to open the PivotTable and PivotChart Wizard.
4. In the first step of the wizard, select the Multiple consolidation ranges option.
5. In the second step, select the tables that you want to pivot. You can select multiple tables by holding down the Ctrl key while you click on them.
6. Click Next to continue.
7. In the third step, you can choose to create a PivotTable or a PivotChart. Select the option that you want and click Next.
8. In the fourth step, you can choose where you want to place the PivotTable or PivotChart. Select the option that you want and click Finish.

The PivotTable or PivotChart will be created in a new worksheet. You can then add fields to the PivotTable or PivotChart and customize it to your liking.

Here are some additional tips for creating a Pivot of multiple tables:

- Make sure that the tables that you want to pivot are related. This means that they have a common field that links them together.
- If the tables are not related, you can create a relationship between them. To do this, go to the Data tab and click on the Relationships button.
- When you are adding fields to the PivotTable or PivotChart, you can select multiple fields by holding down the Ctrl key while you click on them.
- You can also drag and drop fields to different areas of the PivotTable or PivotChart.

Q25) What happens when you check the “Defer Layout Update” option present in bottom of the PivotTable Fields window?

In case you check this option, you will not see dynamic changes while interchanging the table fields. By default, this option is off or unchecked. All the changes will appear only after you click on the Update button when you check this box.

Q26) Can you create a pivot table using tables from different worksheets?

If both the sheets are from the same workbook, you can create a pivot table for tables from different sheets as well. To create a pivot table from two different sheets, follow the same steps as shown in Q24 and when you specify the tables, go to the respective sheet and select the tables you intend to merge.

Q27) Is it possible to see the details of the results displayed in a pivot table?

Yes, it is possible to see the details of the results shown by the pivot tables in Excel. In order to see the details for any result, double-click on the value and you will see that a new sheet has been created with a new table having details about the factors that have led to that particular result. For example, if I double-click on one of the city values for Brad in the pivot table shown in Q15, I will see the following table that displays the details regarding the same:

Q28) How are PivotTables used to filter data?

Excel PivotTables allow you to filter data according to your requirements. To do this, place the field based on which you wish to filter out the data. Then from the pivot table, open the dropdown list present for the field you have placed in the Filter area and select the section of your choice. For example, in the table shown in Q22, if you wish to filter the data for different cities, you can do it easily as shown below:

As you can see, I have filtered the data for Chicago.

Q29) How do you change the value field to show some other result other than the Sum?

In order to change the value field to show results other than the Sum, right-click on the Sum of Amount values and then click on Value Field Settings. Here is the dialog box that you will see:

From here, you can select any value of your choice and then click on OK.

Q30) How to stop automatic sorting in PivotTables?

Excel automatically sorts the data present in the Pivot Tables. In case you do not want Excel to do this, open the dropdown menu from the Row Labels or the Column Labels, and then click on More Sort Options. You will see the Sort dialog box opening. Click on More Options and unselect the Sort automatically option.

Formulas and Functions:

Q31) What do you understand by Excel functions?

Functions, in Excel, are used to perform specific tasks. Excel has many built-in functions that are used to calculate results of various formulas thereby helping in time conservation. Also, these functions make it very easy to execute formulas which would have been difficult to manually write down.

Q32) What are the various categories of functions available in Excel?

Functions in Excel are categorized as follows:

Catagory	Important Formulas
Date & Time	DAY, DATE, MONTH, etc
Financial	ACCINTM, DOLLARDE, ACCINT, etc
Math & Trig	SUM, SUMIF, PRODUCT, SIN, COS, etc
Statistical	AVERAGE, COUNT, COUNTIF, MAX, MIN, etc
Lookup & Reference	COLUMN, HLOOKUP, ROW, VLOOKUP, CHOOSE, etc
Database	DAVERAGE, DCOUNT, DMIN, DMAX, etc
Text	BAHTTEXT, DOLLAR, LOWER, UPPER, etc
Logical	AND, OR, NOT, IF, TRUE, FALSE, etc
Information	INFO, ERROR.TYPE, TYPE, ISERROR, etc
Engineering	COMPLEX, CONVERT, DELTA, OCT2BIN, etc
Cube	CUBESET, CUBENUMBER, CUBEVALUE, etc
Compatibility	PERCENTILE, RANK, VAR, MODE, etc
Web	ENCODEURL, FILTERXML, WEBSERVICE

Q33) What is the operator precedence of formulas in Excel?

Formulas in Excel are executed according to the BODMAS rules. BODMAS, as many of us know, stands for Brackets Order Division Multiplication Addition and Subtraction. That means, in every formula, brackets are executed first (if they are present) followed by multiplication, division, etc.

In Microsoft Excel, formulas follow a specific operator precedence, which determines the order in which Excel performs calculations within a formula. The following is a general guide to the operator precedence in Excel, listed from highest precedence to lowest:

- 1. Parentheses:** Operations enclosed in parentheses are evaluated first. You can use parentheses to override the default operator precedence and explicitly specify the order of operations.
- 2. Exponentiation (^):** The exponentiation operator is used for raising a number to a power.
- 3. Multiplication (*) and Division (/):** Multiplication and division operators have the same precedence and are evaluated from left to right.
- 4. Addition (+) and Subtraction (-):** Addition and subtraction operators also have the same precedence and are evaluated from left to right.
- 5. Concatenation (&):** The ampersand (&) operator is used for concatenating text strings.
- 6. Comparison Operators:** These include operators like = (equal to), <> (not equal to), > (greater than), < (less than), >= (greater than or equal to), and <= (less than or equal to). Comparison operators are used in logical and conditional formulas.
- 7. Logical Operators:** Logical operators include AND, OR, and NOT. They are used in logical and conditional formulas to perform logical operations.
- 8. Unary Plus (+) and Unary Minus (-):** These are used to represent positive and negative numbers, respectively.
- 9. Percentages (%):** The percentage operator is used to calculate percentages.
- 10. Intersection Operator (space):** In Excel tables, you can use a space between two references to indicate their intersection.

Remember that when operators have the same precedence, Excel performs calculations from left to right. It's essential to be aware of operator precedence when constructing complex formulas to ensure that Excel performs the calculations as intended. If in doubt, using parentheses to explicitly specify the order of operations can help clarify the formula's logic.

The operator precedence in Excel is the order in which Excel performs operations in a formula. When a formula contains multiple operators, Excel evaluates the operators in the order of precedence, from highest to lowest.

The following table shows the operator precedence in Excel, from highest to lowest:

Exponents (^)

Multiplication (*) and division (/)

Addition (+) and subtraction (-)

If a formula contains operators with the same precedence, Excel evaluates the operators from left to right.

For example, the following formula will return a value of 15:

= 5 + 2 * 3

Excel will first evaluate the multiplication operation, which will result in a value of 6. Excel will then add the value 5 to the value 6, resulting in a final value of 15.

You can use parentheses to override the operator precedence. For example, the following formula will return a value of 11:

`= (5 + 2) * 3`

Excel will first evaluate the expression inside the parentheses, which will result in a value of 7. Excel will then multiply the value 7 by the value 3, resulting in a final value of 21.

It is important to understand the operator precedence in Excel so that you can write formulas that produce the expected results.

Q34) Explain SUM and SUMIF functions.

SUM: The SUM function is used to calculate the sum of all the values that are specified as a parameter to it. The syntax of this function is as follows:

`=SUM(number1, number2, ...)`

SUMIF: This function is used to calculate the sum of values that comply with a given condition.

SYNTAX:

`=SUMIF(range, criteria, [sum_range])`

Where range specifies the range of cells to be evaluated criteria provides the condition to be met sum range is optional and provides the actual cells to be summed up.

SUM Function:

The `SUM` function in Excel is used to add up a range of numbers. It takes multiple arguments, which can be numbers, cell references, or ranges, and returns the sum of all the values in those arguments.

SYNTAX:

`=SUM(number1, [number2], ...)`

- `number1`, `number2`, etc.: These are the numbers or cell references that you want to add together.

Example of SUM Function:

Suppose you have the following numbers in cells A1 to A5:

A1: 10

A2: 15

A3: 20

A4: 25

A5: 30

You can use the SUM function to calculate the sum of these numbers as follows:

`=SUM(A1:A5)`

The result will be `100`, which is the sum of all the numbers in the specified range.

SUMIF Function:

The `SUMIF` function in Excel is used to add up values in a range that meet a specific condition. It allows you to sum values based on a given criteria or condition.

SYNTAX:

`=SUMIF(range, criteria, [sum_range])`

- `range`: This is the range of cells that you want to evaluate against the criteria.

- `criteria`: This is the condition that must be met for a cell to be included in the sum.

- `sum\_range` (optional): This is the range of cells that you want to sum. If omitted, the `range` is used as both the range to evaluate and the range to sum.

Example of SUMIF Function:

Suppose you have a list of products in column A and their corresponding sales in column B:

A	B

Apple	10
Banana	15
Orange	20
Apple	25
Banana	30

You want to calculate the total sales of "Apple" products. You can use the SUMIF function as follows:

`=SUMIF(A1:A5, "Apple", B1:B5)`

This formula will sum the values in cells B1 to B5 but only for the rows where the corresponding cell in column A is "Apple." The result will be `35`, which is the total sales of "Apple" products.

The SUM and SUMIF functions are powerful tools in Excel for performing summation calculations, whether you need to add a range of numbers or sum values based on specific conditions.

The SUM function in Excel is used to add up the values in a range of cells. The SUMIF function is used to add up the values in a range of cells based on a specified criterion.

Examples:

`=SUM(A1:A10)` // This formula will add up the values in cells A1 to A10. `=SUMIF(A1:A10, ">50", B1:B10)` // This formula will add up the values in cells B1 to B10, but only if the corresponding values in cells A1 to A10 are greater than 50.

The SUMIF function can be used to solve a variety of problems. For example, you could use it to:

- Calculate the total sales for a specific product.
- Calculate the average salary for employees in a specific department.

- Calculate the number of students who passed a test.

Here is an example of how to use the SUMIF function to calculate the total sales for a specific product:

```
=SUMIF(A1:A10, "Product A", B1:B10)
```

This formula will add up the values in cells B1 to B10, but only if the corresponding values in cells A1 to A10 are equal to "Product A".

The SUMIF function is a powerful tool that can be used to save you time and effort when working with data in Excel.

Q35) What are the different types of COUNT functions available in Excel?

Excel provides five types of COUNT functions i.e COUNT, COUNTA, COUNTBLANK, COUNTIF, and COUNTIFS.

The COUNT returns the total number of cells that have numbers in the range that is specified to it as a parameter.

Excel provides several COUNT functions that allow you to count cells with different criteria. Here are the most commonly used COUNT functions in Excel:

1. COUNT Function:

- Syntax: `=COUNT(value1, [value2], ...)`
- Purpose: Counts the number of cells that contain numbers or numerical values within the specified arguments.
- Example: `=COUNT(A1:A10)` counts the number of cells in the range A1:A10 that contain numbers.

2. COUNTA Function:

- Syntax: `=COUNTA(value1, [value2], ...)`
- Purpose: Counts the number of cells that are not empty (contain any data, including text, numbers, errors, or logical values) within the specified arguments.
- Example: `=COUNTA(A1:A10)` counts the number of non-empty cells in the range A1:A10.

3. COUNTBLANK Function:

- Syntax: `=COUNTBLANK(range)`
- Purpose: Counts the number of empty cells (cells with no data) within the specified range.
- Example: `=COUNTBLANK(A1:A10)` counts the number of empty cells in the range A1:A10.

4. COUNTIF Function:

- Syntax: `=COUNTIF(range, criteria)`
- Purpose: Counts the number of cells within a range that meet a specified single condition (criteria).
- Example: `=COUNTIF(A1:A10, ">50")` counts the number of cells in A1:A10 that are greater than 50.

5. COUNTIFS Function:

- Syntax: `=COUNTIFS(range1, criteria1, [range2, criteria2], ...)`
- Purpose: Counts the number of cells within multiple ranges that meet specified conditions (criteria) using logical AND.

- Example: `=COUNTIFS(A1:A10, ">50", B1:B10, "<100")` counts the number of cells where both conditions are true: values in A1:A10 are greater than 50 and values in B1:B10 are less than 100.

These COUNT functions are helpful for various data analysis tasks in Excel, whether you need to count numbers, non-empty cells, empty cells, or cells that meet specific criteria. You can use them individually or in combination, depending on your requirements.

The following are the different types of COUNT functions available in Excel:

- COUNT: The COUNT function counts the number of cells in a range that contain numbers.
- COUNTA: The COUNTA function counts the number of cells in a range that are not empty. This includes cells that contain text, numbers, dates, and logical values.
- COUNTBLANK: The COUNTBLANK function counts the number of empty cells in a range.
- COUNTIF: The COUNTIF function counts the number of cells in a range that meet a specified criterion.
- COUNTIFS: The COUNTIFS function counts the number of cells in a range that meet multiple criteria.

Here are some examples of how to use the different COUNT functions:

=COUNT(A1:A10) // This formula will count the number of cells in cells A1 to A10 that contain numbers.

=COUNTA(A1:A10) // This formula will count the number of cells in cells A1 to A10 that are not empty.

=COUNTBLANK(A1:A10) // This formula will count the number of empty cells in cells A1 to A10.

=COUNTIF(A1:A10, ">50") // This formula will count the number of cells in cells A1 to A10 that are greater than 50.

=COUNTIFS(A1:A10, ">50", B1:B10, "Product A") // This formula will count the number of cells in cells A1 to A10 that are greater than 50 and the corresponding values in cells B1 to B10 are equal to "Product A".

The COUNT functions can be used to solve a variety of problems. For example, you could use them to:

- Calculate the number of customers who made a purchase in a month.
- Calculate the number of products that are in stock.
- Calculate the number of employees who are on vacation.

The COUNT functions are powerful tools that can be used to save you time and effort when working with data in Excel.

Q36) How do you calculate the percentage in Excel?

Percentages, as we all know, are ratios that are calculated as a fraction of 100. Mathematically, the percentage can be defined as follows:

$$\text{Percentage} = (\text{Part} / \text{Whole}) \times 100$$

In Excel, the percentage can be calculated in a similar manner. Take a look at the image below where the percentage has been calculated for the values present in A1 and A2.

Here are the steps followed in order to obtain the result:

Select the cell destination cell to display the percentage

Then, type a "=" sign

Type in A1/ A2 then hit the Enter key

Click on Home tab, select % symbol from the numbers group

Q37) Explain how to calculate compound interest in Excel?

To calculate compound interest in Excel, you can use the FV function. FV returns the future value of an investment based on the periodic, constant interest rate and payments.

SYNTAX:

FV(rate, nper, pmt, pv, type)

To find the rate, the number of periods are used to divide the annual rate (annual rate/ periods). nper is obtained by multiplying the no. of years (term) with the periods (term * periods). Periodic payment (pmt) can be any value (including zero).

EXAMPLE:

compound interest excel-edureka

The investment amount is \$500, rate is 10% for 5 years. There are no periodic payments hence the value for pmt is 0. -B1 means that \$500 has been taken from you. Therefore, the FV for this is \$822.65.

Q38) How do you find averages in MS Excel?

Average can be calculated using the AVERAGE function.

SYNTAX:

AVERAGE(number1, number2, ...)

EXAMPLE:

Average Excel-Edureka

To calculate the average marks scored by Dave and Ava, I have used the AVERAGE function.

Q39) What is VLOOKUP in Excel?

VLOOKUP is a function present in Excel used to lookup and bring forth data from a given range. V in VLOOKUP stands for Vertical and to use this function, data should be arranged vertically. VLOOKUP is very useful when you have to find some piece of data from a huge amount of data.

Q40) How does the VLOOKUP function work?

The VLOOKUP function, in Excel, a lookup value and begins to look for the same in the leftmost column. When it finds the first occurrence of the given lookup value, VLOOKUP starts to move right i.e in the row where the value was found. It goes on until the column number specified by the user and returns the desired value. This function is used to match exact and approximate lookup values. However, the default match is an approximate match.

Syntax:

VLOOKUP(lookup_value, table_array, col_index_num, [range_lookup])

here,

lookup_value gives the value to be looked out for

table_index is the range from where the data is to be taken

col_index_num specifies the column from which you want to fetch the value

range_lookup is a logical value i.e TRUE or FALSE (TRUE will find the closest match; FALSE checks for exact match)

Q41) Explain the exact match with an example.

For an exact match, set the range_lookup value as FALSE.

EXAMPLE:

In case you want to look for the designation of an employee, follow the given steps:

Select the destination cell and type “=”

Use VLOOKUP

Specify the lookup_value (Here, it is the ID) along with the other parameters

Set range_lookup value to FALSE

The function will be: =VLOOKUP(104, A1: D8, 3, FALSE)

exact match-VLOOKUP in Excel-Edureka

As you can see, VLOOKUP has returned the designation of the employee having 104 as his ID.

Q42) Explain the approximate match with an example.

For an approximate match, VLOOKUP will fetch values when there are no exact matches of the given lookup_value. For an approximate match, set the range_lookup value to TRUE. Remember that the table must be sorted in ascending order for VLOOKUP to do an approximate match. So here, VLOOKUP basically starts to look for an approximate match of the given lookup value and then stops at a value that is next largest of the given lookup value. It then moves into that row to return the value from the column that has been specified.

The following image shows an example of an approximate match by VLOOKUP:

Approximate match-VLOOKUP in Excel_edureka

Follow the same steps specified for exact match

For the range_lookup value, use TRUE

The function will be: =VLOOKUP(55, A12: C15, 3, TRUE)

The lookup value is 55 and the next largest of the lookup value present in the first column is 40. Hence, the output is 'Second Class'.

Q43) Can you use VLOOKUP for multiple tables?

Yes, you can use VLOOKUP for multiple tables as well. In case you have two lookup tables, create named ranges for each table, and then use the IF function to select between each table based on some given condition. [Click here to know more about this.](#)

Q44) How do you perform a horizontal lookup in Excel?

To perform a horizontal lookup, you will have to make use of the HLOOKUP function.

Q45) How will you fetch the current date in Excel?

You can make use of the TODAY function. This function will return the current date in the MS Excel date format.

SYNTAX:

TODAY()

EXAMPLE:

Q46) How does the AND function work?

The AND function in Excel is used to whether a given condition or a set of conditions is TRUE or not. In case all the conditions are satisfied, this function will return a boolean TRUE.

SYNTAX:

AND(logical1, [logical2], ...)

where,

logical1, logical2, ... are conditions from 1-255 that you want to check

EXAMPLE:

Q47) What is the What If Analysis?

What If Analysis is the technique of performing changes to one or more formulas present in the cells in order to see how it affects the result of those formulas in the worksheet. Excel provides three types of What If Analysis tools:

Scenarios

Goal Seek

Data Tables

Scenarios and Data Tables take a set of inputs to check for the potential results. Scenarios can work with many variables but input values can be at the max 32. Data tables, on the other hand, work with just one or two variables but can accept many distinct values for each of those variables.

Goal Seek, in contrast to Scenarios and Data Tables, takes the outputs and determines the possible inputs for the same.

Q48) Can you create shortcuts for most frequently used formulas?

Yes, you can do it by customizing the Quick Access Toolbar. To customize it, right-click anywhere on the Quick Access Toolbar and select the Customize Quick Access Toolbar option. You will see the following window:

From here, select Formulas and then choose any formula that you wish to create a shortcut for.

Q49) What is the difference between formulas and functions in Excel?

Formulas are that are defined by the user that is used to calculate some results. Formulas either be simple or complex and they can consist of values, functions, defined names, etc.

A function, on the other hand, is a built-in piece of code that is used to perform some particular action. Excel provides a huge number of built-in functions such as SUM, PRODUCT, IF, SUMIF, COUNT, etc.

Q50) How do you use wildcards with VLOOKUP?

Wildcards can be used when you are not sure of the exact lookup value. In order to use wildcards in Excel, you should make use of the "*" symbol.

For example, in the table that you see in the image below, if you enter “erg” and then use wildcards with it, VLOOKUP will fetch the output that corresponds to “Sergio”.